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# Owners of second homes, locals and their attitudes towards future rural wind farm

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## HIGHLIGHTS

- Studies acceptability of wind power between local residents and owners of second home.
- Survey data complemented with semi-structured interviews.
- The attitudes differ between locals and owners of second homes in a rural area.
- New information regarding differences in wind energy attitudes between Finnish second home owners and locals.

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## ABSTRACT

Wind power has been identified as one of the most promising sources of renewable energy. However, its diffusion has not been as rapid as anticipated. The objective here is to analyse attitudes towards wind power among Finnish local residents and owners of second homes. First, we assess their existing knowledge of and level of interest in energy issues and wind power. Second, we analyse potential differences in attitudes between the two stakeholder groups when it comes to wind power in general and the proposed wind farm in particular. The study draws on both quantitative survey data and qualitative interview data. One of the key findings concerns the different perceptions among locals and owners of second homes in a rural area. Both groups were interested in questions of energy production and accepted wind power in general. Nevertheless, the proposed project in Ruokolahti seemed to polarize attitudes. This paper offers new insights into attitudes to wind energy among Finnish locals and owners of second homes in the same area.



## 1. Introduction

Energy efficiency and renewable energy production have become major targets in many countries worldwide (Ladenburg et al., 2013; Rosenberg et al., 2013), and wind power has been identified as one of the most promising sources of renewable energy (Klick and Smith, 2010; Wang and Sun, 2012). Wind power has been strongly emphasized in Finland in recent years, and is supported through investment subsidies, information guidance offered to energy companies and consumers, and the funding of technological research (Holttinen, 2004; Varho and Tapio, 2005). However, in reality the growth has not been "as fast as anticipated or hoped for" (Varho and Tapio, 2005, p. 1931). The literature identifies many factors that explain the lack of adequate investment in wind energy (see e.g., Dimitropoulos and Kontoleon, 2009), including legislative efficacy and potentially mixed signals, and opposition to wind farms (see e.g., Dimitropoulos and Kontoleon, 2009; Smith Stegen and Seel, 2013).

The objective of this paper is to analyse attitudes to wind power among Finnish local residents and owners of second homes[1]. Ownership of free-time residences in Finland is high: at the end of 2012 there were almost half a million of them, and 58 of the 336 municipalities had more free-time residences than permanently occupied dwellings. Free-time residences tend to be located in rural areas on the shore of a lake or by the sea (Official

[1] The term second home means a residence for free-time and holiday use. These free-time residences (villas or summer cottages) are called second homes in this article. The owners of the free-time residences are called second home owners. Second homes have been an integral part of the Finnish rural recreational landscape since the eighteenth century (Vepsäläinen and Pitkänen, 2010).

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Statistics of Finland (OSF), 2012). This makes Finland a unique and interesting context in which to study attitudes towards rural wind farms. Thus, we focus on two stakeholder groups (owners of second homes and local residents) and analyse their attitudes towards wind power. Combining the survey and interview data we first assess the existing knowledge among these two groups, and the level of interest in energy issues and wind power. Second, we analyse the potential differences in attitudes to wind power in general and the proposed wind farm in particular. To our current knowledge, this is the first attempt to compare the acceptability of wind power in Finland among locals and owners of second homes, and to draw from both quantitative and qualitative data in this setting. There also appear to be few international studies comparing two or more stakeholder groups. The findings reported in this paper could help managers of wind farms to recognize at an early enough stage the factors that affect the wind-energy business, and policy makers may also find the study useful when contemplating policy decisions and financial incentives.

The rest of the paper is organized as follows. The next section discusses the previous research on attitudes towards wind power. Section 3 describes the research design as well as the context of this study in detail. The results are presented and discussed in Section 4, and Section 5 concludes the paper.

## 2. Public attitudes towards wind power

The NIMBY (Not-In-My-Backyard) syndrome is a concept that is often related to wind power. NIMBY-motivated opponents have positive attitudes towards the application of wind power *in general* but they oppose the construction of turbines in their own neighbourhood (Wolsink, 2007). This negative relation between general and local support of wind energy tends to be attributed to people's selfish concern about personal utility. However, the NIMBY syndrome has turned out to be too simplistic an explanation of the resistance. According to (Wolsink, 2007, p. 1201), opposition may take following four forms of which the first one is the only true NIMBY-motivated opposition:

i. "A positive attitude towards the application of wind power, combined with an intention to oppose the construction of any wind power scheme in one's own neighbourhood."
ii. "The not-in-any backyard variant, which means opposition to the application of the wind power in the neighborhood because the technology of wind power as such is rejected."
iii. "A positive attitude towards wind farms, which turns into a negative attitude as a result of the discussion surrounding the proposed construction of a wind farm."
iv. "Resistance created by the fact that some construction plans are themselves faulty, without a rejection of the technology itself."

The existing literature also identifies a wide range of other reasons emerging from empirical research: visual impact (e.g., Devlin, 2005; Firestone and Kempton, 2007; Jones and Eiser, 2010; Haggett, 2011), questions of ownership and participation in planning and decision-making (e.g., Jobert et al., 2007; Haggett, 2011), interest in environmental issues (Ek, 2005), inequality (e.g., van der Horst and Toke, 2010) and community fairness (Gross, 2007). Haggett (2011) and Devine-Wright (2005, 2011) also investigated the role of place attachment in the context of attitudes towards wind power.

Although not fully explaining opposition to wind power, many previous studies report "backyard motives" as a significant factor in its social acceptance. Jones and Eiser (2010), for example, studied the gap between general attitudes to wind power and attitudes to the development of wind turbines at identified sites. They found that when the development was 'out of sight' it was considered on the general level, but as soon as the turbines became visible, attitudes changed. Visibility and concerns about detrimental effects on the landscape heavily influenced the endorsement of these sites. Ek (2006) has studied e.g. the preferences for off-shore wind power and more recently Ladenburg (2008, 2009, 2010) and also Aravena et al. (2014), who, found out that respondents favour (far-off) offshore wind turbines. Meyerhoff et al. (2010) found the minimum distance from wind turbines to residential areas to affect significantly on respondents' choices. On the other hand, Devine-Wright (2005) found no apparent relationship between living in close proximity to a planning area and attitudes to wind power. Thus, it seems that the effect of distance and visibility on attitudes is not consistent.

It should also be borne in mind that attitudes towards wind power are dynamic in nature: they change in a U-shaped pattern (Wolsink, 2007). People are generally positive about it when there are no real plans to build a wind farm, but attitudes turn negative when projects are announced. However, they may turn positive again once the wind farm has been built (Wolsink, 2007). Fokaides et al. (2014) even found some evidence of a YIMBY (Yes in my backyard) effect in their post-construction analysis, as local residents were more favourable to the erected wind farm than those living further away. In general, situations in which a high level of general support for wind energy turns into objection to a specific project tend to provoke misunderstandings. Planners tend to see this as a gap between consumer preferences and the default acceptance of environmental innovation (Kaenzig et al., 2013). Recognition of the dynamic nature of public attitudes and giving people the opportunity to contribute to planning processes with their local viewpoints and knowledge should help to avoid such misunderstandings (Swofford and Slattery, 2010).

In addition, the public should not be treated as an integrated whole in the gauging of attitudes to wind power: they belong to or represent different stakeholder groups such as inhabitants, local authorities, companies, land owners or environmental organizations, and hence could be characterized as disunited (Aitken, 2010; Wüstenhagen et al., 2007). Socio-demographic variables such as income level, gender and level of education may have an effect (Ladenburg, 2010; van der Horst and Toke, 2010) or seem negligible (Johansson and Laike, 2007). However, studies comparing different stakeholder groups appear to be rather rare. Table 1 summarizes the existing research on wind power in which two stakeholder groups are compared. These studies comparing different demographic groups have enhanced understanding not only of the different groups and their characteristics but also of their attitudes.

With regard to Finland, there have been numerous surveys to chart Finnish attitudes to energy production (e.g. Kiljunen, 2009) and some previous studies on attitudes to wind power, but they are rather general in nature. One example is the recent work of Kosenius and Ollikainen (2013), who investigated public preferences for renewable-energy technologies (wind power, hydro power and energy from crops and wood). They found regional differences, but wind power was still the most popular. Large-scale attitude surveys and polls such as these primarily give a general picture, but, as stated above, on the local level positive attitudes may turn into opposition, often because of environmental impacts such as noise or landscape effects (Krohn and Damborg, 1999).

In sum, it seems that, there is a research gap when it comes to studies comparing attitudes to wind power in two or more stakeholder groups. There is also a clear need for local-level research in Finland. Our aim in this paper is to shed more light on this research area by comparing two Finnish dwelling groups, local people and owners of second homes, and their attitudes